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C L A I M S:

1. A diaphragm for a loudspeaker drive unit, the diaphragm comprising a block of material having a first,
5 sound-radiating front face and a second, rear face, characterized in that the block is stiffened by being bound about over the first and second faces by a multiplicity of turns of one or more elongate members of flexible material stiffened by a stiffening composition.
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2. A diaphragm as claimed in claim 1, wherein the front face is convex.
3. A diaphragm as claimed in claim 1 or claim 2,
15 wherein the second face is convex.
4. A diaphragm as claimed in claim 2 or claim 3, wherein the or each face is frusto-conical.
- 20 5. A diaphragm as claimed in any preceding claim, wherein the block is circular in front elevation.
6. A diaphragm as claimed in any of claims 1 to 4, wherein the block is elliptical in front elevation.

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7. A diaphragm as claimed in any preceding claim,
wherein the block is made of a rigid plastics foam
material.

5 8. A diaphragm as claimed in claim 7, wherein the foam
has a density of more than 20 grams per litre

9. A diaphragm as claimed in claim 8, wherein the foam
has a density between 28 and 35grams per litre.

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10. A diaphragm as claimed in any one of claims 7 to 9,
wherein the foam is a polymethyl methacrylamide foam.

11. A diaphragm as claimed in any one of claims 7 to 9,
15 wherein the foam comprises expanded polystyrene.

12. A diaphragm as claimed in any preceding claim,
wherein the block contains one or more internal voids.

20 13. A diaphragm as claimed in any preceding claim,
wherein the one or more elongate members are in tension.

14. A diaphragm as claimed in claim 12, wherein the
tension is a relatively low tension just sufficient to
25 maintain the members taut at all times in use.

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15. A diaphragm as claimed in any preceding claim,
wherein the or each elongate member is constituted by a
bundle of monofilaments.

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16. A diaphragm as claimed in claim 15, wherein the
monofilaments are plastics material monofilaments.

17. A diaphragm as claimed in claimed in claim 16,
10 wherein the monofilament material is paraphenylene
polybenzobisoxazole.

18. A diaphragm as claimed in claim 15, wherein the one
or more flexible elongate members comprise glass fibre
15 monofilaments.

19. A diaphragm as claimed in any preceding claim,
wherein the body of material is bound about by a single
flexible elongate member.

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20. A diaphragm as claimed in any preceding claim,
wherein the diaphragm is a diaphragm for sub-bass or
bass or bass-mid audio frequencies.

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21. A diaphragm as claimed in claim 20, wherein the body of material is bound about by between 100 and 500 turns.

5 22. A diaphragm as claimed in claim 21, wherein the body of material is bound about by between 200 and 400 turns.

23. A diaphragm as claimed in any preceding claim,
10 wherein a protective rim is provided at the periphery of the block between the one or more elongate members and the material of the block.

24. A diaphragm as claimed in any preceding claim,
15 wherein the one or more elongate members are adhesively secured directly to the material of said block.

25. A diaphragm as claimed in any preceding claim,
wherein the said first face of the block of the material
20 and said one or more flexible members are arranged to act directly on the ambient air to radiate sound.

26. A diaphragm as claimed in any preceding claim,
wherein the diaphragm is bonded to a central tubular

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member for carrying the voice coil of the loudspeaker drive unit.

27. A diaphragm as claimed in any preceding claim,
5 wherein the stiffening composition comprises a resin composition.

28. A diaphragm as claimed in claim 27, wherein the resin composition is selected from the group consisting
10 of a styrene resin, an epoxy resin, a cellulose solvent based acrylic resin, a polyurethane resin, a cyanocrylate resin, and a thermosetting phenolic based resin.

15 29. A diaphragm for a loudspeaker drive unit substantially as herein described with reference to, and as illustrated by, Figure 1 of the accompanying drawings.

20 30. A diaphragm for a loudspeaker drive unit substantially as herein described with reference to, and as illustrated by, Figure 2 of the accompanying drawings.

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31. A diaphragm for a loudspeaker drive unit substantially as herein described with reference to, and as illustrated by, Figure 3 of the accompanying drawings.

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32. A loudspeaker drive unit including a diaphragm as claimed in any preceding claim.